

7.0 Utilities

7.1 Introduction

The land use component of the Paseo del Norte/North Albuquerque Acres Sector Development Plan envisions a rural residential area with moderate density residential and neighborhood commercial land uses limited to the eight sites along Paseo del Norte and Eubank Boulevard. A large percentage of the area has been developed as single-family homes on one acre. Because of the established pattern of development, minimal change is anticipated or encouraged by this Sector Development Plan.

Utility service to North Albuquerque Acres should provide an appropriate level of service and maintain the rural character that is important to area residents. On-site systems, community systems, and extensions of the Metropolitan Water Utility system and wastewater system are all possible methods of serving the area over the long term. Utility extensions may be necessary to support many of the higher density and non-residential uses proposed along Paseo del Norte. However, annexation is not desired or encouraged by this plan.

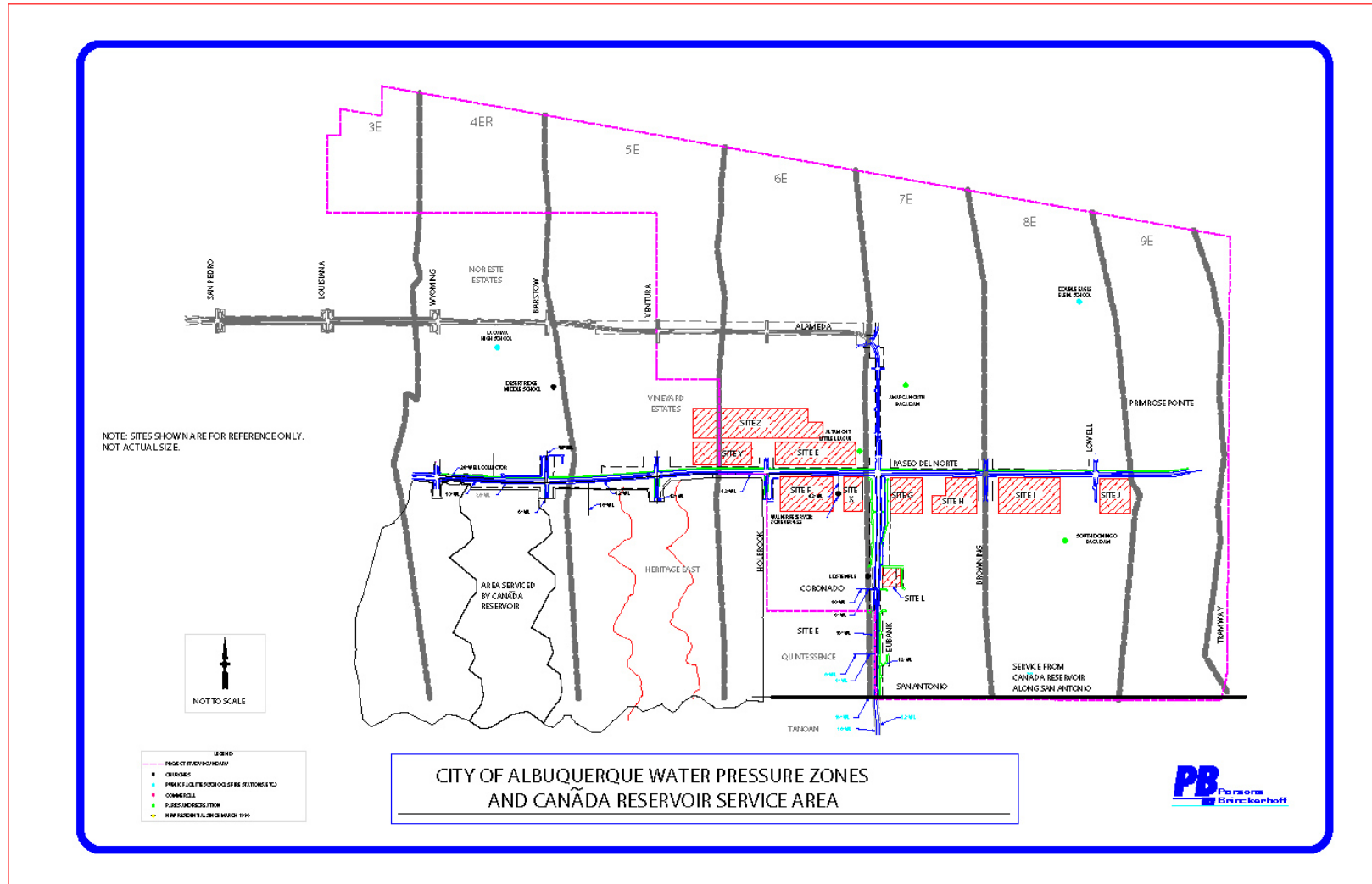
The utility discussion below describes options presented in the 2001 Sector Plan for providing water and wastewater utility services to the proposed SD zones along Paseo del Norte and Eubank Boulevard. The North Albuquerque Acres Water/Sewer Feasibility Report (Resolution AR 103-2004) adopted in 2004 provides an updated analysis of the utility service extension options for the study area.

7.2 Level of Service Options for the Eight Sites in the Proposed SD Zone

7.2.1 Private Water and Wastewater Systems

Private water systems may be constructed for individual parcels, consisting of wells and septic systems. Water systems may also be sized to specifically serve individual development areas. An example of a small water system to serve multiple sites along Paseo del Norte would be a system that consisted of a well, a pressure storage tank and/or a booster pump for fire flow requirements and a distribution system for sites G, H, I, J, and X. Site L would be better served from the City water line extension that has been placed in Eubank Boulevard for the new LDS Temple.

Figure 7-1 City of Albuquerque Water Pressure Zones and Canada Reservoir Service Area



Small private water and wastewater systems have been constructed in the North Albuquerque Acres area for many years for single-family residential lots and small domestic water associations serving as many as five lots. All such systems must be designed, permitted, and constructed in accordance with the requirements of the New Mexico Environment Department, the Bernalillo County Environmental Health Department, and the Office of the State Engineer.

In addition to established ordinance and statute requirements, the Office of the State Engineer has recently declared portions of the northeast heights as a “critical management area” (“Middle Rio Grande Administrative Area Guidelines for Review of Water Right Applications”, The Office of the New Mexico State Engineer, September 13, 2000). Within the critical management area, the declaration imposes new requirements for individual wells, including metering requirements for new domestic wells, and restrictions on small water system operators, including restrictions against new wells and the requirement for small water system operators to obtain water rights projected to be needed over the next 40 years prior to making application for a new well permit.

The Bernalillo County Wastewater Ordinance 2000-7 established new regulations for septic systems. There is the potential that septic systems will need to meet the performance standards of the County Wastewater Ordinance by the year 2015. This may mean retrofitting existing on-site systems or connecting to a sewer system if the option becomes available.

7.2.2 Extension of City of Albuquerque Water and Wastewater Systems

Water Utility

As defined by the City of Albuquerque’s Water Master Plan, the project area along Paseo del Norte is located in the Alameda Trunk, and extends from Pressure Zone 6E on the west to just inside Pressure Zone 9ER on the east. Physically, there are existing limitations to the ability of the City of Albuquerque’s water system to provide water to the North Albuquerque Acres area. The sector plan area falls within the Alameda Trunk as identified on the City’s water master plan. The highest reservoir within the Alameda Trunk is the Walker Reservoir, located south of Paseo del Norte west of Eubank. This reservoir provides service to properties within pressure zone 6E, limited to properties below elevation 5695, which crosses Paseo del Norte approximately one-quarter mile east of Ventura. Properties above this elevation, such as those in Quintessence and portions of Heritage East and Ridgefield North Subdivisions, are currently served by transfers of water from Montgomery Trunk facilities through master plan waterlines in San Antonio, Santa Monica and Eubank. Water is not currently available to the plan area from this source.

Assuming that existing policy restrictions can be overcome, there are three basic options for obtaining water service by extension of the City of Albuquerque’s water system to the eight sites: 1) construction of a zone 8E reservoir at the intersection of Tramway and Paseo del Norte, 2) transfer of water from Montgomery Trunk facilities by connection to existing waterlines in San Antonio, Santa Monica and Eubank, or 3) construction of booster pumps near the Walker Reservoir. Any and all of these options must be verified and coordinated with the City’s Public Works Department, Utility Development Division, through a request for water and sewer availability statement. Provision of options 2 and 3, except during temporary or interim

conditions, is likely to be viewed with less favor by City Utility staff due to capacity and reliability constraints.

The Alameda Trunk Zone 8E Reservoir was identified within the City’s Reservoir Siting Plan, prepared by Bohannon Huston in 1994. It is currently in the City’s Capital Improvement Decade Plan to begin design in 2007. When completed, it will be capable of providing gravity service to properties below elevation 5940, which crosses Paseo del Norte approximately at Lowell Street. Options for service to properties east of this zone boundary and above this elevation must be further evaluated. These options may include provision of a booster pump to supply water with adequate pressure to properties above Lowell Street.

Sanitary Sewer Utility

In general, the availability of sanitary sewer service is predicated on the volume of the design flows being planned for and the downstream capacity of the collection system. For this project area, predicted wastewater volumes were calculated using the land use descriptions for each of the eight proposed alternative development sites. These land use descriptions broke the proposed development into both commercial and residential uses based on the land area within the development site. The predicted wastewater volumes were then calculated for each of the sites using City of Albuquerque residential and commercial wastewater loading guidelines. Table 7-1 presents the design guidelines that were used in this study.

Table 7-1 City of Albuquerque Wastewater Loading Guidelines

Land Use Description	Residential Population Loading (persons/DU)	Residential Wastewater Loading (gpd/person)	Commercial Wastewater Loading (gpd/acre)
Residences	3	110	n/a
Light Commercial (offices, etc.)	n/a	n/a	1,230
Light Institutional (church)	n/a	n/a	226

City of Albuquerque guidelines were also used to determine both the peak and design flows that will be used to assess service availability to the eight sites. All collection systems are, at a minimum, sized for peak flows. Design flow is used to provide expansion room in a collection system to allow for upstream development. Table 7-2 provides the average flows, peak flows and design flows for all of the sites included in this study.

- A 12-inch gravity interceptor constructed within Paseo del Norte could provide service to the entire study area (with the possible exception of site L). This interceptor would be an extension of the existing 12-inch VCP (vitrified clay pipe) interceptor in Paseo del Norte west of Wyoming Boulevard. Preliminary calculations, based on the slope of the existing line, indicate that this interceptor should have sufficient capacity to handle all of the predicted design flow from the study area.

Table 7-2 Proposed Wastewater Flows

Sites	# Lots	Land Use Description	Acres	Dus	Commercial Wastewater Loading (Gpd/Acre)	Commercial Wastewater Volume (Average Flow, Gpd)	Residential Population Loading (Persons/Du)	Residential Wastewater Generation (Average Flow, Gpd)	Total Average Flow (Gpd)	Total Peak Flow (Gpd)	Design Flow (Gpd)
E*	13	Residences (6 DUs/acre)	11.5	69	n/a		3.3	25047	25047		
								Subtotal Site E	25047	94806	113767
								Res. – 15,464			
F	8	Office	2.4		1230	2911	n/a		2911		
		Clinic	2.4		1230	2911	n/a		2911		
		Institutional	2.4		226	535	n/a		535		
	6	Residences (6 DUs/acre)	5.3	32	n/a		3.3	11543	11543		
								Subtotal Site F	17900	70364	84437
								Res. – 15,464			
G	8	Art, Antique, or Gift Shop	7.1		1230	8733	n/a		8733		
		Beauty/Barber Shop									
		Book/Stationery Store									
		Butcher, Feed Store									
		Newsstand, Restaurant									
		Fruit/Vegetable Stand									
		Bakery, Bank, Church									
		Clinic, Grocery, Deli, Office									
								Subtotal Site G	8733	37215	44658
H	13	Residences (6 DUs/acre)	11.5	69	n/a		3.3	25047	25047		
								Subtotal Site H	25047	94806	113767
								Res. – 34, 848			
I	18	Residences (6 DUs/acre)	4	24	n/a		3.3	8712	8712		
		Office	4		1230	4920	n/a		4920		
		Clinic	4		1230	4920	n/a		4920		
		Institutional	4		226	904	n/a		904		
								Subtotal Site I	19456	75766	90919
J	4	Bakery, Bank, Clinic	2.9		1230	3567	n/a		3567		
		Book/Stationery Store									
		Office									
								Subtotal Site J	3567	16812	20174
L	4	Miscellaneous Uses	3.6		1230	4428	n/a		4428		
								Subtotal Site L	4428	20368	24442
								Res. – 7,841			
X	4	Office	1.2		1230	1476	n/a		1476		
		Clinic	1.2		1230	1476	n/a		1476		
		Institutional	1.2		226	271	n/a		271		
								Subtotal Site X	3223	15365	18439
Y *	6	Residences (6 DUs/acre)	5.3	32	n/a		3.3	11543	11543		
								Subtotal Site Y	11543	47672	57206
Z *	29	Residences (4 DUs/acre)	25.6	102	n/a		3.3	37171	37171		
								Subtotal Site Z	37171	134586	161503

- All wastewater loadings were calculated using City of Albuquerque Development Process Manual.

- *Annexed by the City of Albuquerque in 2002

Site L, depending on the depth of the line constructed in Paseo del Norte, could be serviced by a collector line in Eubank that flows to the north. It is more likely, however, that site L could share services with the LDS temple facility immediately to the west of the site.

Figure 7-2 illustrates where the proposed 12-inch gravity interceptor would tie into the existing 12-inch interceptor in Paseo del Norte west of Wyoming Boulevard.

7.2.3 Financial Responsibility

Financial responsibility for water and sewer line extensions is set by the Water Utility and Wastewater Utility. Line extensions at this time are subject to those policies. The recommended study of utility service options will evaluate methods of financing utility extensions to North Albuquerque Acres.

7.3 Level of Service Options for the A-1 Zone

7.3.1 Private Water and Wastewater Systems

Most residential properties in North Albuquerque Acres are served by individual on-site systems. Exceptions include Primrose Pointe, which is served by the private community water system for Sandia Heights, and clusters of homes served by small domestic water associations. Individual water and wastewater systems, subject to State and County regulations, are one option for service.

7.3.2 Extension of City of Albuquerque Water and Wastewater Systems

Bernalillo County has reviewed three levels of public water and wastewater service for rural and semi-rural areas adjacent to Albuquerque. The 2001 Sector Plan recommended that a level of service options study for the Sector Plan area be conducted. At the November 23, 2004 public hearing, the Board of County Commissioners voted to adopt the North Albuquerque Acres Water/Sewer Feasibility Study. The Study identifies various options for water and sewer service in the North Albuquerque Area (AR 103-2004).

Figure 7-2 Proposed Sanitary Sewer Utilities within the Study Area

